Overview of Activity Two

In this activity, your students explore Roofus's web page (from the coloring bookmarks). The page was designed by the U.S. Department of Energy's Office of Building Technology, State and Community Programs to teach children about solar energy and energy efficiency. The goal of this activity is to introduce your students to the Internet as a means of *reading to be informed.* This activity can be completed by classes with or without Internet access.

Levels:
Grades K-3

Subject:
- Reading
- Science

Concepts:
- Students will understand that they can help the environment by using less energy from fossil fuels and more energy from renewable energy.
- Things that use electricity in the students' homes
- Most of the electricity in the United States is made at power plants that burn things like coal or natural gas
- Solar panels turn sunlight into electricity

Skills:
- Reading to be informed
- Identifying an author's purpose
- Using a glossary
- Listening and read-aloud experience

Materials:
- Internet access computers
- Solar energy reading selection (p. 16)

Assessment:
- Prepare a quiz or essay question referencing the key concepts mentioned in the solar energy reading selection on page 16 or in the glossary on pp. 19-20.

Getting ready for Activity Two

If your class can access the Internet:

1. Go to the media center, library, or other location with computers that have Internet access.
2. Access the Internet and go to the following internet address: http://www.eren.doe.gov/roofus.
3. Mark Roofus's web page with the computers' bookmark or shortcut function.
4. Familiarize yourself with some of the hotlink buttons with information about solar energy.
5. Think about the author's purpose, and identify a few questions to test student comprehension.

If you do not have access to the Internet:

1. Make a copy of page 16 for each student in your class.
2. Think about the author's purpose, and identify a few questions to test student comprehension.

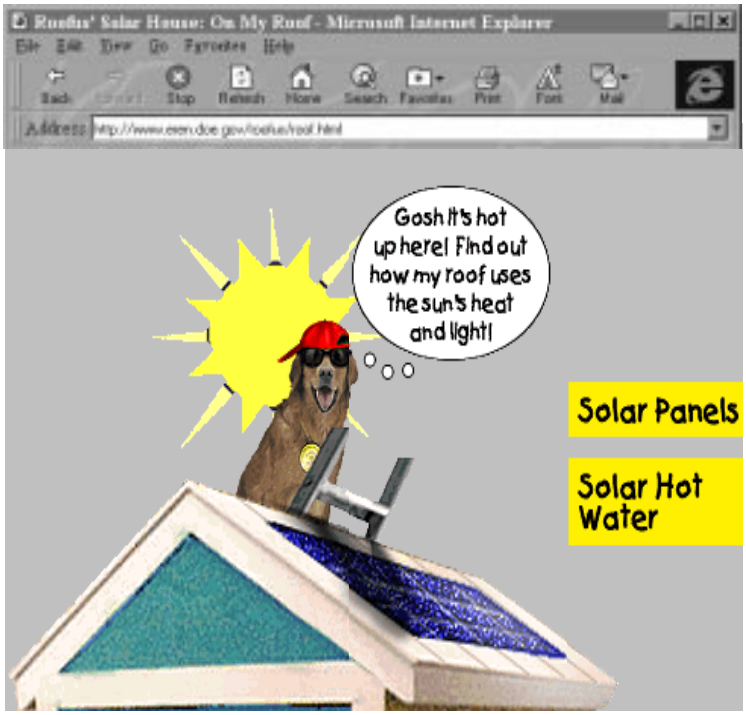
Doing Activity Two

If your class can access the Internet:

1. Go to the media center, library, or other location with computers that have Internet access.
2. Tell the children how to access Roofus's web page. (See getting ready step 3).
3. Encourage the students to click on the various hotlink buttons to familiarize themselves with the way to navigate a web page.
4. Select one or more of the solar links to review as a class.
5. Take turns reading the selection(s) aloud.
6. Ask the students several questions to test their comprehension, participation, and listening skills.

If you do not have access to the Internet:

1. Distribute a copy of page 16 for each student in your class.
2. Take turns reading page 16 aloud. (K-1 teachers may find it easier to read this information during storytime).
3. Ask the students several questions to test their comprehension, participation and listening skills.



Solar Panels

From the Webpage

Big wires carry electricity miles and miles to your home. The electricity comes from power plants.

When you turn on a light in your home, electricity flows through wires up to the light bulb and makes it glow. Lots of things in your house use electricity. Your television set, the telephone, clocks, and stereos are just a few of the things that use electricity. But where does the electricity come from?

Big wires carry electricity to your home. If you live in a house, you can probably see these wires running from somewhere outside your house up to a telephone pole. In an apartment building or in a big city, the wires might be buried so you can't see them. These wires go miles and miles to a big power plant that makes the electricity. Most of the electricity in the United States is made at power plants that burn things like coal or natural gas. The power plants use the heat from burning things to make electricity.

I have a new way to make electricity. The solar panels on my house make electricity from the sun. Whenever the sun is up, even when it's cloudy, my solar panels turn the sunlight into electricity. Instead of a big wire that goes miles away, I just need a wire that goes up to my roof. My house makes its own electricity!

You can build solar cars and other toys that make electricity from the sun. Look for solar toys in electronics stores or toy stores, or you can order them from scientific supply catalogs. These toys use small solar cells to make electricity, so they don't need batteries! There are hundreds of these solar cells built into the solar panels on my roof.

Putting solar panels on your roof is a new way to make electricity.

Not many people have solar panels on their roofs right now, but you'll be seeing a lot more of them as you grow older. The President of the United States has promised to help put a million solar hot water collectors and solar panels on roofs by the year 2010. How old will you be then?

Reproducible student page from the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy; Office of Building Technology, State and Community Programs